

### REMARKS

The Examiner objects to claims 24 and 33 because the term “cooling blood flow through” is awkward and suggests “cooling blood flowing through” as better phrasing. Applicant has amended claims 24 and 33 as suggested by the Examiner.

Claims 24 - 27 are rejected under 35 USC 103 (as being unpatentable over U.S. Patent 4,931,047 to Broadwin et al. in View of U.S. Patent 6,203,540 to Weber. The Examiner contends that “Broadwin et al. teach an apparatus for delivering RF energy and ultrasonic energy to a tissue site (abstract) with a fluid that cools the tip and the blood and tissue particles (Col.3, lines 57-62) .... Weber teaches an apparatus for delivery of energy to tissue, the energy being ultrasonic energy and laser delivered in pulses (Col.7, lines 40-43). The apparatus includes sensors for determination of tissue temperature (Fig.3,#25).” The Examiner further contends that “It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the temperature sensor and pulsed delivery as taught by Weber in the invention of Broadwin et al. as both are well known in the art of providing improved control of the energy delivery to tissue.”

Applicant has amended Claim 24 and dependent claims 25,26 and 27 to include the limitation of “a drug for moderating the degree of blood flow cooling” as described on page 8, lines 19 and 20 of the specification. Broadwin et al teaches the use of a saline irrigation fluid at the surgical site to cool “ the vibrating tip 22 and the blood, tissue particles and other aspirated material to prevent the tool 20 from being damaged and to slow down the coagulation of the blood” (Col.3, lines 60-63, emphasis added). Applicant respectfully submits that the use of “a drug for moderating the degree blood flow cooling” as stated in amended Claim 24 and new Claim 34 is not obvious in view of the use of saline solution for preventing “ the tool 20 from being damaged

and to slow down the coagulation of the blood” as described in Broadwin et.al..

In amended Claim 25, the drug for moderating the degree of blood flow cooling is limited to Thorazine. Applicant includes a copy of pages 117 and 715 from Merriam-Webster’s Medical Desk Dictionary defining Thorazine as a drug included in a preparation of chlorpromazine used as a tranquilizer to suppress the more flagrant symptoms of disturbed behavior ( as in schizophrenia). Applicant submits that the use of Thorazine for moderating the degree of blood flow cooling as stated in amended Claim 25 would not be obvious in view of the use of saline solution as taught by Broadwin et. al. Reconsideration of the rejection and allowance of currently amended Claims 24,25 and dependant Claims 26, 27 is respectfully requested.

Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4, 931, 047 to Broadwin et.al. in view of U.S. Patent 6, 203, 540 to Weber, as applied to Claim 24 above, and further in view of U.S. Patent 6, 506, 189 to Rittman et.al..

Applicant submits that none of the cited prior art patents disclose the limitation in amended Claim 24 and new Claim 34 of “ a drug for moderating the degree of blood flow cooling” and for the reasons discussed above, such limitation would not be obvious to one skilled in the art in view of the cited prior art patents.

Reconsideration of the rejection and allowance of Claims 28-30 is respectfully requested.

Claims 31 and 32 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent 4, 931, 047 to Broadwin et.al. in view of U.S. Patent 6, 203, 540 to Weber as applied to claim 24 above, and further in view of U.S. Patent 5, 891, 134 to Goble et.al..

Applicant submits that none of the cited prior art patents disclose the limitation in amended Claim 24 and new Claim 34 of “a drug for moderating the degree of blood flow cooling” and for the reasons discussed above, such limitation would not be obvious to one skilled in the art in view of the cited prior art patents.

Reconsideration of the rejection and allowance of claims 31 and 32 is respectfully requested.

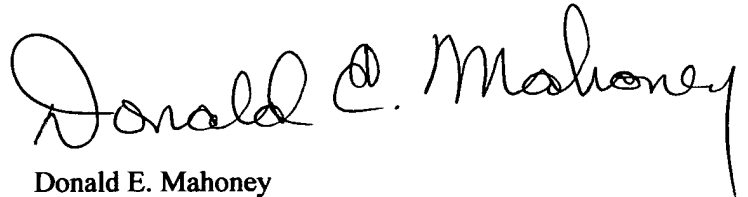
Claim 33 is rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent 6, 203, 540 to Weber in view of U.S. Patent 4, 931, 047 to Broadwin et.al..

Applicant submits that none of the cited prior art patents disclose the limitation in amended Claim 33 and new Claim 34 of “ a drug for moderating the degree of blood flow cooling” and for the reasons discussed above, such limitation would not be obvious to one skilled in the art in view of the cited prior art patents.

Reconsideration of the rejection and allowance of amended Claim 33 and new Claim 34 is respectfully requested.

Respectfully submitted

By

A handwritten signature in black ink that reads "Donald E. Mahoney". The signature is fluid and cursive, with the first name "Donald" being the most prominent.

Donald E. Mahoney

Attorney for Applicant

Registration No. 26,639

Wellesley, MA 02482

Tel. No. (781) 235-0081

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# Merriam-Webster's

## Medical Desk

## Dictionary

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MERRIAM-WEBSTER INC., Publishers,  
Springfield, Massachusetts, U.S.A.



chlor-mer-o-drin \klor-'mer-a-dran, klor-'n : a mercurial diuretic  $C_2H_5HgCl_2$  used in the treatment of some forms of edema, ascites, and nephritis  
chlor-o-acetic acid \klor-o-'a-sit-ik, also chlor-acetic acid \klor-'a-sit-ik : MONOCHLOROACETIC ACID  
chlor-o-aceto-to-phen-one \klor-o-'a-sit-(j)o-fa-'non, klor-'o-'a-sit-ik or chlor-aceto-to-phen-one \klor-'o-'a-sit-ik : a chlorine derivative of acetophenone; esp : the alpha derivative used esp. in solution as a tear gas — abbr. CN  
chlor-o-ane-mia or chloretic Brit chlor-o-ane-mia \klor-o-'a-ne-'mia, klor-'n : chlorosis  
chlor-o-az-o-din \klor-o-'a-z-ad-'n, klor-'o-'a-dan : a yellow crystalline compound  $C_2H_3Cl_3$  used in solution as a surgical antiseptic  
chlor-o-bu-ta-nol \klor-o-'bu-ta-'n-ol, -ol : a white crystalline alcohol  $C_4H_9ClO$  with an odor and taste like camphor that is used as a local anesthetic, sedative, and preservative (as for hypodermic solutions)  
chlor-o-cre-sol \klor-'o-'sol, -sol : any of several chlorine derivatives of the cresols; esp : the para derivative  $C_6H_4Cl_2O$  used as an antiseptic and preservative  
chlor-o-cru-o-rin \klor-'o-'ru-'a-ran : a green iron-containing respiratory pigment related chemically to hemoglobin and found in the blood of some marine polychaete worms  
chlor-o-form \klor-'o-'form, klor-'n : a colorless volatile heavy toxic liquid  $CHCl_3$  with an ether odor that is used esp. as a solvent or as a general anesthetic — called also trichloromethane  
chloroform-vi : to treat with chloroform esp. so as to produce anesthesia or death  
chlor-o-gen-ic acid \klor-'o-'jen-ik, klor-'n : a crystalline acid  $C_6H_6O_6$  occurring in various plant parts (as potatoes or coffee beans)  
chlor-o-gua-nide \klor-'o-'gwa-'n-id, klor-'n : a crystalline chlor-gua-nide \klor-'o-'gwa-'n, klor-'n : an antimalarial drug  $C_{11}H_{16}N_4Cl$  derived from biguanide and administered as the bitter crystalline hydrochloride — called also proguanil  
chlor-o-leu-ke-mia \klor-'o-'leu-'ka-mia, klor-'n : chloro-leukemia  
chlor-o-ma \klor-'o-'ma, klor-'n : a malignant tumor  
chlor-o-ma or ma-ta \klor-'o-'ma-ta, klor-'n : leukemia originating in the bone marrow and marked by the formation of growths of myeloid tissue resembling tumors beneath the periosteum of flat bones (as the skull, ribs, or pelvis)  
chlor-o-ma-tous \klor-'o-'ma-'t-us, klor-'n : METHYL CHLORIDE  
chlor-o-meth-ane \klor-'o-'meth-'an, klor-'n : METHYL CHLORIDE  
chlor-o-meth-try \klor-'o-'meth-'a-try, klor-'n : pl : tries : the quantitative measurement of chlorine  
chlor-o-mi-ti \klor-'o-'mi-'ti, klor-'n : TRADEMARK  
chlor-o-per-cha \klor-'o-'par-'cha, klor-'n : a solution of gutta-percha in chloroform used esp. in dentistry (as for filling a root canal)  
chlor-o-pheno \klor-'o-'fe-'no, klor-'n : a crystalline chlor-pheno \klor-'o-'fe-'no, klor-'n : any of three derivatives  $C_6H_5ClO$  of phenol containing a single chlorine atom per molecule; esp : the para derivative that is used as a topical antiseptic  
chlor-o-phen-o-thane \klor-'o-'fen-'a-'than, klor-'n : a derivative of phenol  
chlor-o-phyll \klor-'o-'fil, klor-'n : 1 : the green photosynthetic coloring matter of plants found in chloroplasts and made up chiefly of a blue-black ester  $C_{55}H_{72}MgN_4O_6$  and a dark green ester  $C_{55}H_{70}MgN_4O_6$  — called also respectively chlorophyll a, chlorophyll b : 2 : a waxy green chlorophyll-containing substance extracted from green plants and used as a coloring agent or decolorant — chloro-phyllous \klor-'o-'fi-'us, klor-'n : also chlor-phyll-ose \klor-'o-'fi-'os, klor-'n : adj  
chlor-o-phyll-lase \klor-'o-'fi-'las, klor-'n : an enzyme present in leaves that hydrolyzes chlorophyll to chlorophyllides and phytol  
chlor-o-phyll-ide \klor-'o-'fi-'id, klor-'n : any of the pigments obtained from chlorophyll by removal of the phytol radical  
chlor-o-phyll-pigment \klor-'o-'fi-'pig-'ment, klor-'n : CHLOROPHYLL  
chlor-o-pic-rin \klor-'o-'pik-'ran, klor-'n : a heavy colorless liquid  $CCl_3NO_2$  that causes tears and vomiting and is used esp.

Chloro-pi-dae \klor-'ap-a-'de, klor-'klo-'pāp-'n : a family of small nearly hairless flies with broad heads and short antennae including some which are irritating though nonbiting pests about the eyes of man and various animals and are sometimes implicated in the transmission of diseases (as yaws) — see IMPELATES  
chlor-o-plast \klor-'o-'plast, klor-'n : a plastid that contains chlorophyll and is the site of photosynthesis and starch formation  
chlor-o-plas-tic \klor-'o-'plast-'ik, klor-'n : adj  
chlor-o-pro-caine \klor-'o-'pro-'kan, klor-'n : a local anesthetic  $C_9H_{10}ClN_2O$  used chiefly in the form of a salt (as the white powdery hydrochloride) — see NESACAIN  
chlor-o-ris-ta \klor-'o-'ris-'ta, klor-'n : a visual defect in which all objects appear green  
chlor-o-quine \klor-'o-'kwēn, klor-'n : an antimalarial drug  $C_{15}H_{14}ClN_3$  administered as the bitter crystalline diphosphate  $C_{15}H_{14}ClN_3P_2O_8$   
chlor-o-ro-sis \klor-'o-'ro-'sis, klor-'n : an iron-deficiency anemia in young girls characterized by a greenish color of the skin — called also greenishness — chloro-rotic \klor-'o-'rot-ik, klor-'n : adj  
chlor-o-then \klor-'o-'then, klor-'n : an antihistaminic agent  $C_{15}H_{13}ClN_3$  used administered in the form of a citrate  
chlor-o-thi-a-zide \klor-'o-'thi-'a-'zid, klor-'n : a thiazide diuretic  $C_6H_8ClN_4O_2S_2$  used esp. to treat edema and to increase the effectiveness of antihypertensive drugs  
chlor-o-thy-mol \klor-'o-'thi-'mol, -mol : n : any of several chlorine derivatives of thymol; esp : the para derivative  $C_{10}H_7ClO$  used as a germicide (as in mouthwashes)  
chlor-o-tri-an-sene \klor-'o-'tri-'an-'sen, klor-'n : a synthetic compound  $C_6H_5Cl_3O$  that is converted to a potent estrogenic substance in the living system and is used esp. orally to treat menopausal symptoms  
chlor-o-us \klor-'o-'us, klor-'n : adj : relating to or obtained from chlorine esp. with a valence of three  
chlor-o-xy-le-nol \klor-'o-'zi-'le-'nol, klor-'n : any of several chlorine derivatives of the xylenols; esp : the para derivative  $C_6H_4Cl_2O$  used as an antiseptic and germicide  
chlor-phen-e-sin carbamate \klor-'o-'fen-'a-'sin-'n : a white crystalline powdery drug  $C_{16}H_{18}ClN_4O_4$  used to relax skeletal muscle — see MIOXATE  
chlorphenol var of CHLOROPHENOL  
chlor-prom-a-zine \klor-'o-'pām-'a-'zēn, klor-'n : a phenothiazine derivative  $C_{17}H_{19}ClN_2S$  used as a tranquilizer esp. in the form of its hydrochloride to suppress the more frequent symptoms of disturbed behavior (as in schizophrenia) — see LARGACTIL  
chlor-prop-amide \klor-'o-'pāp-'a-'mid, -prop-'n : a sulfonylurea drug  $C_{10}H_{13}ClN_2O_3S$  used orally to reduce blood sugar in the treatment of mild diabetes  
chlor-tet-ra-cyne \klor-'o-'te-'ra-'sf-'kēn, klor-'n : a yellow low crystalline antibiotic  $C_{22}H_{12}Cl_2N_4O_6$  produced by a soil actinomycete of the genus Streptomyces (*S. aureofaciens*) used in the treatment of diseases and added to animal feeds for stimulating growth  
chlor-thal-i-done \klor-'o-'thal-'a-'dōn, klor-'n : a sulfonamide  $C_{12}H_{11}ClN_3O_3S$  that is a long-acting diuretic used esp. in the treatment of edema which is associated with congestive heart failure, renal disease, cirrhosis of the liver, pregnancy, and obesity — see HYCORON  
Chloro-carbonyl  
Chlor-o-na \klor-'o-'na, klor-'n : pl chlor-nae \klor-'o-'nae : 1 : an anatomical opening resembling a funnel : 2 : one of the pair of openings between the nasal cavity and the nasopharynx — called also posterior nares — chlor-naal \klor-'o-'na-'al, klor-'n : adj  
Chlor-o-nae-ta \klor-'o-'na-'ta, klor-'n : a genus of tunicoid tapeworms including a number of intestinal parasites of birds of which one (*C. influndibulum*) is an important pest of chickens and turkeys  
Choke \klor-'o-'chōk, -chōk : v : to check normal breathing or by compressing or obstructing the windpipe or by poisoning or adulterating available air ~ vt : to become choked in breathing  
Choke : n : 1 : the act of choking : 2 : chokes pl : caisson disease when marked by suffocation — used with the  
choked disk

chol abbr cholesterol  
cholaemia, cholaemic chiefly Brit var of CHOLEMIA  
cho-la-rh-o-ic \klor-'a-'rh-ik, klor-'n : adj : being a cholagogue : inducing a flow of bile  
cho-la-rh-o-gue \klor-'a-'rh-gē, klor-'n : an agent that promotes an increased flow of bile  
cho-lane \klor-'o-'lan, klor-'n : a crystalline steroid hydrocarbon  $C_{27}H_{48}$  from which the bile acids are derived  
chol-an-gio-gram \klor-'o-'lan-'je-'a-'gram, klor-'n : a roentgenogram of the bile ducts made after the ingestion or injection of a radiopaque substance  
chol-an-gio-graphy \klor-'o-'lan-'je-'a-'grā-fē, klor-'n : pl -phies : roentgenographic visualization of the bile ducts after ingestion or injection of a radiopaque substance — chol-an-gio-graphic \klor-'o-'grāf-'ik, klor-'n : adj  
chol-an-gio-le \klor-'o-'lan-'je-'ol, klor-'n : a bile canaliculus  
chol-an-gio-li-tis \klor-'o-'lan-'je-'o-'lit-'is, klor-'n : pl -liti-des \klor-'o-'liti-'des, klor-'n : adj : inflammation of bile capillaries  
chol-an-gio-li-tic \klor-'o-'lan-'je-'o-'lit-'ik, klor-'n : adj  
chol-an-gio-ma \klor-'o-'lan-'je-'o-'ma, klor-'n : pl -mas : also -mata : carcinoma of a bile duct  
chol-an-gi-tis \klor-'o-'lan-'jit-'is, klor-'n : pl -git-i-des \klor-'o-'jit-'i-des, klor-'n : adj : inflammation of one or more bile ducts — called also angiocholitis  
cho-lan-ic acid \klor-'o-'lan-'ik, klor-'n : a colorless crystalline acid  $C_{27}H_{46}COOH$  some of whose hydroxy and keto derivatives constitute the bile acids  
chol-ano-poi-e-sis \klor-'o-'lan-'o-'poi-'ē-sis, klor-'n : pl -eses \klor-'o-'sēz, klor-'n : adj : synthesis of cholic acid, its derivatives, or bile by the liver  
chol-an-threne \klor-'o-'lan-'thren, klor-'n : a pale yellow crystalline polycyclic carcinogenic hydrocarbon  $C_{20}H_{14}$  — compare METHYLCHOLANTHRENE  
cho-late \klor-'o-'lat, klor-'n : a salt or ester of cholic acid  
cho-le-cal-cif-er-ol \klor-'o-'kal-'sif-'a-'rōl, -rōl : n : an alcohol  $C_{27}H_{46}OH$  that is the predominant form of vitamin D in most fish-liver oils and is formed in the skin on exposure to sunlight or ultraviolet rays — called also vitamin D, vitamin D<sub>3</sub>  
cho-le-chro-mo-poi-e-sis \klor-'o-'kro-'mo-'poi-'ē-sis, klor-'n : pl -eses \klor-'o-'sēz, klor-'n : adj : formation of bile pigments by the liver  
cho-le-cyst-ic \klor-'o-'sis-'tik, klor-'n : adj  
cho-le-cyst-a-gogue \klor-'o-'sis-'a-'gē, klor-'n : an agent (as cholecystokinin) that causes the gallbladder to discharge bile  
cho-le-cyst-ec-to-mized \klor-'o-'sis-'tek-'ta-'mizd, klor-'n : adj : having had the gallbladder removed  
cho-le-cyst-ec-to-my \klor-'o-'sis-'tek-'ta-'mē, klor-'n : pl -mies : surgical excision of the gallbladder  
cho-le-cyst-ten-er-o-s-to-my \klor-'o-'sis-'tēn-'a-'rās-'ta-'mē, klor-'n : or cho-le-cyst-ten-er-o-s-to-my \klor-'o-'sis-'tēn-'a-'rās-'ta-'mē : surgical union of and creation of a passage between the gallbladder and the intestine  
cho-le-cys-ti-tis \klor-'o-'sis-'ti-'tis, klor-'n : pl -iti-des \klor-'o-'iti-'des, klor-'n : adj : inflammation of the gallbladder  
cho-le-cys-to-gram \klor-'o-'sis-'ta-'gram, klor-'n : a roentgenogram of the gallbladder made after ingestion or injection of a radiopaque substance  
cho-le-cys-top-ra-phy \klor-'o-'sis-'tāp-'ra-'fē, klor-'n : pl -phies : the roentgenographic visualization of the gallbladder after ingestion or injection of a radiopaque substance — cho-le-cys-top-ra-phy \klor-'o-'sis-'tāp-'ra-'fē, klor-'n : adj  
cho-le-cys-to-ki-net-ic \klor-'o-'sis-'ta-'ka-'net-'ik, klor-'n : adj : tending to cause the gallbladder to contract and discharge bile  
cho-le-cystokine \klor-'o-'sis-'ta-'kēn, klor-'n : a hormone secreted by the duodenal mucosa that regulates the emptying of the gallbladder and secretion of enzymes by the pancreas — called also cholecystokinin-pancreozymin, pancreozymin  
cho-le-cys-tor-rha-phy \klor-'o-'sis-'tōr-'a-'fē, klor-'n : pl -phies : repair

chol \klor-'o-'chol, klor-'n : further \klor-'o-'further, klor-'n : adj : further  
chol-out \klor-'o-'chol, klor-'n : easy \klor-'o-'easy, klor-'n : adj : easy  
chol-ing \klor-'o-'chol, klor-'n : boy \klor-'o-'boy, klor-'n : thin \klor-'o-'thin, klor-'n : adj : thin

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